



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,256	01/27/2005	Matthew Spencer Collins	PG4902USw	1132

23347 7590 03/12/2008

GLAXOSMITHKLINE

CORPORATE INTELLECTUAL PROPERTY, MAI B475

FIVE MOORE DR., PO BOX 13398

RESEARCH TRIANGLE PARK, NC 27709-3398

EXAMINER

BAINBRIDGE, ANDREW PHILIP

ART UNIT

PAPER NUMBER

4156

NOTIFICATION DATE

DELIVERY MODE

03/12/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USCIPRTP@GSK.COM

JULIE.D.MCFALLS@GSK.COM

LAURA.M.MCCULLEN@GSK.COM

### Office Action Summary

**Application No.**

10/523,256

**Applicant(s)**

COLLINS ET AL.

**Examiner**

Andrew P. Bainbridge

**Art Unit**

4156

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)  
Paper No(s)/Mail Date 1/27/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: the use of "1.)" and "2.)" could lead to confusion on claim numbering, and so should be changed to either "A", and "B", or something else other than a number.

Appropriate correction is required.

2. Claim 4 is objected to because of the following informalities: the phrase "the driveable connection" should read "a driveable connection". Appropriate correction is required.

3. Claim 6 is objected to because the phrases "a first lever" and "a second lever" are inconsistent with phrases in other claims such as "the or each lever". Appropriate correction is required.

4. Claim 11 is objected to because of the following informalities: the phrase "used to attach" should read "which connects". Appropriate correction is required.

5. Claim 12 is objected to because of the following informalities: the phrase "formed" should read either "is formed", "is manufactured", or "is molded" which connects". Appropriate correction is required.

6. Claim 45 is objected to because of the following informalities: the phrase "formed in a one of" should read "formed in one of". Appropriate correction is required.

Formatted: Bullets and Numbering

7. Claims 38-47 are objected to because of the following informalities: the word "hosing" most likely is intended to be "housing", and the claims were interpreted as such. Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 20 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is unclear which lever applicant means by the phrase "the lever".

10. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is unclear what applicant means by the phrase "a body member".

11. Claim 27-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is unclear what applicant means by the phrase "in the form of".

12. Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the claim does not specify adequately how the pump works, and what elements are present in the pump that creates its functionality.

Formatted: Bullets and Numbering

Formatted: Bullets and Numbering

Deleted: Claim 1 recites the limitation "pump" in "I" and "II". There is insufficient antecedent basis for this limitation in the claim.

13. Claim 1 recites the limitation "pump" in "ii" and "iii". There is insufficient antecedent basis for this limitation in the claim.

14. Claim 3 recites the limitation "said one end of the container". There is insufficient antecedent basis for this limitation in the claim.

15. Claims 1, 3-4, 15-16, 18, 20-21, and 25 recite the limitation "the or each lever". There is insufficient antecedent basis for this limitation in the claim.

16. Claim 14 recites the limitation "the cylindrical outer surface". There is insufficient antecedent basis for this limitation in the claim.

17. Claim 15 recites the limitation "the portion of the collar reacts". There is insufficient antecedent basis for this limitation in the claim.

18. Claims 16-17 recites the limitation "respective racks". There is insufficient antecedent basis for this limitation in the claim.

19. Claim 36 recites the limitation "the or each rack". There is insufficient antecedent basis for this limitation in the claim.

20. Claims 5, 7, 11-12, 34-35 recite the limitation "the or each toothed rack". There is insufficient antecedent basis for this limitation in the claim.

#### ***Drawings***

21. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. **Therefore, the compression pump, suction inlet, and discharge outlet referenced in claim 33 and dependently in claims 34-36 must be shown** or the feature(s) canceled from the claim(s). No new matter should be entered.

**Deleted:** <#>Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the claim does not specify adequately how the pump works, and what elements are present in the pump that creates its functionality.¶

**Deleted:** 0

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

22 The following is a quotation of the appropriate paragraphs of 35

Deleted: 11

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

23 **Claims 1-3, 20-24, and 26-32 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,272,391 (Meshberg).**

Deleted: 12

24 Claim 1, Meshberg discloses:

Deleted: 13

A fluid dispensing device for spraying a fluid into a body cavity comprising:

- a. a housing, (element 15)
  - b. a nozzle for insertion into a body cavity, (element 14)
  - c. a fluid discharge device moveably housed within the housing, the fluid discharge device comprising (elements 13, 17, Fig. 4-5, Col. 1, lines 50-73)
    - 1.) a container for storing the fluid to be dispensed and (element 11, Fig. 1-6, col. 1, line 10-30)
    - 2.) a compression pump having
      - i.) a suction inlet located within the container and (element 23)
      - ii.) a discharge outlet at one end of the container for transferring fluid from the pump to the nozzle and (element 14)
      - iii.) a finger operable means to apply a force to the container to move the container towards the nozzle (element 25)
- so as to actuate the pump wherein the finger operable means comprises of at least one lever pivotally supported within the housing and driveably connected to the container (element 25)
- so as to urge the container towards the nozzle when the or each lever is actuated by a user. (element 25, Fig. 4-5, col. 4, lines 5-25)

ment or use operator.

It is also an object of the invention to provide a dispensing package for materials under pressure, having a container for the material and a valve means having an operator movable relative to the container for dispensing the material therefrom, which includes an actuating means operable in a direction transverse to the path of relative movement of the container and valve operator for relatively moving such container and operator to dispense the material.

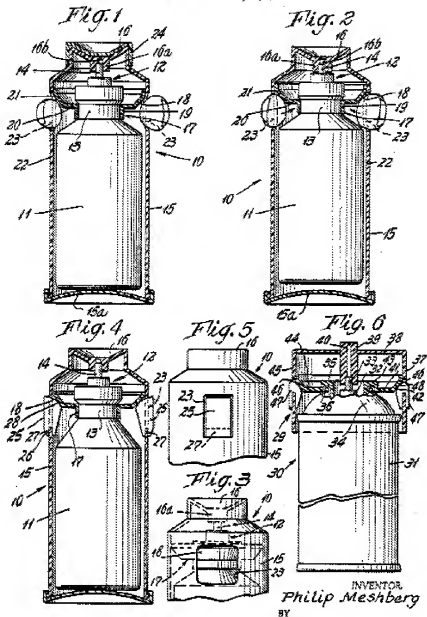
Another object of the invention is to provide a dispensing package for materials under pressure which includes a container having a material under pressure therein, valve means mounted on the container for dispensing the material, the valve means having a stem portion movable relative to the container for operating the valve means, and an actuator for the stem portion, the actuator including a part connected to the stem portion and a part connected to the container, the parts being movable relative to one another on the application, against one of them, of a force applied in a direction transverse to the path of relative movement of the container and stem portion.

in such packages.

Dispensing packages, of the type to which the instant invention relates, have long been known and generally comprise a container having a material under pressure therein and a valve means mounted on the container for dispensing the material on the operation thereof, the valve means including a stem portion movable relative to the container for operating the valve and having a passage therein for passing the material. Most commonly, such dispensing packages have the valve means mounted on an end of the container for closing the same and include a stem portion which is longitudinally reciprocable relative to the container.

The dispensing packages, which are adapted to a wide variety of applications, such as dispensing hair spray, paints, pharmaceuticals, foodstuffs and the like, are normally operated by the application of finger pressure against the valve stem portion for moving the same relative to the container, whereby the valve is operated to dispense the material. While this method of operating the dispensing package is well suited to many applications, it has been found that, for many other applica-

Filed Feb. 12, 1965



5 opening 18 in the end wall 16 through which the material is dispensed.

10 In operating the dispensing package 10 above-described, that is to actuate the operator of the valve means for dispensing material from the container, the cover cap 24 is removed and the casing gripped in one hand as would be natural to hold the dispensing package. The openings 23 are so located that natural gripping of the container will result in the finger tips entering the openings 23 and, on exerting pressure therethrough, the tips of the fingers will engage the camming surface 18 of the collar so that the collar and its connected container are cammed toward the end wall 16 of the casing. Since the stem portion 14 of the valve means is connected to the casing and held thereby against outward movement, the shifting of the container within the casing will result in the desired relative longitudinal movement between the stem portion and the container being achieved, thereby operating the valve and dispensing the material.

15 In FIGS. 4 and 5 a modified form of the dispensing package 10, discussed in connection with FIGS. 1 to 3, is shown. While this construction is substantially identical

Claim 2, Meshberg discloses:

The fluid dispensing device of claim 1

in which there are two opposing levers

each of which is pivotally connected to part of the housing and

is driveably connected to the container

so as to urge the container towards the nozzle when the levers are squeezed

together by a user. (elements 18, 25, 27 Fig. 4-5, col. 4, lines 5-25, lines 63-75,

col. 5, lines 1-10)

is merely wherein the end of the container mounting the valve means.

5 A collar 41 providing a camming surface 42 is connected to the container and movable thereon relative to the casing 29. The collar, as shown, includes a substantially U-shaped annular portion 43, adapted to be snapped into place over the bead formed by the flange 38 and rim 36 for retaining the collar in position relative to the container and has an outwardly and upwardly projecting flange 44, the outer surface of which defines the camming surface 42. The camming surface is disposed adjacent and faces a side wall 48 of the casing, the latter being provided with an opening or openings 46

button 47 is pivotally mounted in each of the openings 46 in any manner known to the art and is provided with a camming surface 48 adapted to engage the camming surface 42 to the collar when it is pressed inwardly of the casing for actuating the collar and its connected container relative to the casing and its connected valve stem portion so that the valve is operated to dispense the material.

10 Thus, among others, the several objects and advantages of the invention as aforesaid are achieved. Obvious numerous changes in the structure may be resorted to without departing from the spirit of the invention as de-

Claim 3, Meshberg discloses:

The fluid dispensing device of claim 1 in which the or each lever is driveably connected to the container near to said one end of the container. (element 25, Fig. 4-5, col. 4, lines 5-25)

Claim 20, Meshberg discloses:

The fluid dispensing device of claim 1 in which the or each lever is pivotally supported within the housing by a pivotal connection between the lever and a part of the housing. (element 27, Fig. 4-5, col. 4, lines 63-75, col. 5, lines 1-10)

Claim 21, Meshberg discloses:

The fluid dispensing device of claim 20 in which the housing has a front wall, a rear wall and two opposing side walls and the or each lever is pivotally connected to the front and rear walls. (elements 22-23, Fig. 4-5, col. 3, lines 65-75, col. 4, 1-8, 23-30)

after the container 11 is inserted therein. 55  
Mounted on the container and movable therewith with  
in the confines of the casing 16 is a collar 17 formed to  
provide a camming surface 18. While the collar may  
take many forms, it is here shown as including an annular  
member 19, embracing the neck 13 of the container, hav- 70  
ing a flange 20 formed integral therewith and provided  
with an upwardly outwardly faced slot 21, the outer sur-  
face of which forms the camming surface 18. The cam-  
ming surface 18 is disposed closely adjacent a side wall 22  
of the casing, the side wall being formed with one or 75

more openings 23 in positions overlying the camming  
surface. The dispensing package, with the actuating  
means above described, may be completed by providing  
the casing with a removable cover cap 24 for closing the  
opening 16b in the end wall 16 through which the material  
is dispensed.  
In operating the dispensing package 10 above-described,  
that is to actuate the operator of the valve means for  
dispensing material from the container, the cover cap

and the container being actuated, thereby operating the  
valve and dispensing the material.  
In FIGS. 4 and 5 a modified form of the dispensing  
package 10, discussed in connection with FIGS. 1 to 3, is  
shown. While this construction is substantially identical  
to the construction of FIGS. 1 to 3, it differs in that buttons  
members 25 are pivotally mounted on the side wall 22 of  
the casing in the openings 23. While the buttons may  
be mounted in any known manner, they are here shown 30

Claim 22, Meshberg discloses:

The fluid dispensing device of claim 20 in which the housing has a front wall, a rear wall and two opposing side walls and at least one of the front wall and the

rear wall has an aperture therein to view the level of the fluid in the container.

(element 11, Fig. 4-5, col. 3, lines 3-10, 65-75, col. 4, 1-8, 23-30)

mounted on an end of the container, for dispensing the material on the operation thereof.

The container 11, which may be formed of metal, glass or similar materials commonly used in the art and which may take any conventional form, is here shown as a glass bottle-type container having a neck portion 13 defining an opening in which the valve means 12 is mounted.

The valve means 12, which is mounted in the opening

Claim 23, Meshberg discloses:

The fluid dispensing device of claim 21 in which each lever projects outwardly from the housing through an aperture formed in a respective one of the side walls. (element 25, Fig. 4-5, col. 3, lines 3-10, 65-75, col. 4, 1-8, 23-30)

Claim 24, Meshberg discloses:

The fluid dispensing device of claim 23 in which the part of each lever which projects from the aperture forms a finger grip. (element 25, Fig. 4-5, col. 4, lines 5-25, 30-45)

30 be mounted in any known manner, they are here shown as being formed with a groove 26 along their bottom edge to facilitate their being snapped in place on the lip 27 formed by the bottom edge of the openings 23. The buttons are provided, at the end adapted to engage the camming surface 18, with a curved contour, as shown at 28, such contour serving as a cam when the button is pressed inwardly of the casing, by the natural pressure resulting from the gripping of the dispensing package, for ramming the collar and container toward end wall 16, as previously described. It should here be noted that in lieu of the cam button 28 other camming means may be resorted to, such as, for example, stamping a tongue into the side wall of the casing or the like, the tongue being movable on the application of finger pressure thereagainst into camming engagement with the camming surface 18.

45 Referring now to FIG. 6, the invention is shown em-

Claim 26, Meshberg discloses:

The fluid dispensing device of claim 1 wherein the container contains a volume of fluid medicament formulation. (Fig. 4-5, col. 1, lines 20-30).

mounted on an end of the container for closing the same and include a stem portion which is longitudinally reciprocable relative to the container.

The dispensing packages, which are adapted to a wide variety of applications, such as dispensing hair spray, paints, pharmaceuticals, foodstuffs and the like, are normally operated by the application of finger pressure against the valve stem portion for moving the same relative to the container, whereby the valve is operated to dispense the material. While this method of operating the dispensing package is well suited to many applications, it has been found that, for many other applica-

Claim 27, Meshberg discloses:

The fluid dispensing device of claim 26 wherein said fluid medicament formulation is in the form of a solution formulation. (Fig. 4-5, col. 1, lines 20-30)

Claim 28, Meshberg discloses:

The fluid dispensing device of claim 26 wherein said fluid medicament formulation is in the form of a suspension formulation. (Fig. 4-5, col. 1, lines 20-30)

Claim 29, Meshberg discloses:

The fluid dispensing device of claim 26 wherein the fluid medicament formulation comprises an anti-inflammatory medicament compound. (Fig. 4-5, col. 1, lines 20-30)

Claim 30, Meshberg discloses:

The fluid dispensing device of claim 29 wherein said medicament compound is a glucocorticoid compound. (Fig. 4-5, col. 1, lines 20-30)

Claim 31, Meshberg discloses:

The fluid dispensing device of claim 30 wherein said glucocorticoid compound is selected from the group consisting of 6 $\alpha$ -, 9 $\alpha$ -Difluoro- 17 $\alpha$ -(1-oxopropoxy)- 11

[3-hydroxy- 16c~- methyl-3-oxo-androsta- 1,4-diene- 17[3-carbothioic acid S-fluoromethyl ester; 6or, 9a-difluoro- 17et-[(2-furanylcarbonyl)oxy]- 11 [3-hydroxy- 16ct-methyl-3-oxo-androsta- 1,4- diene- 17[3-carbothioic acid S-fluoromethyl ester; and 6c~,9ct-Difluoro- 11 [3-hydroxy- 16ct-methyl- 17tx-[(4-methyl- 1,3-thiazole-5-carbonyl)oxy]-3-oxo-androsta- 1,4-diene- 17[3-carbothioic acid S-fluoromethyl ester. (Fig. 4-5, col. 1, lines 20-30)

Claim 32, Meshberg discloses:

The fluid dispensing device of claim 29 wherein said medicament compound is selected from the group consisting of PDE4 inhibitors, leukotriene antagonists, iNOS inhibitors, tryptase and elastase inhibitors, beta-2 integrin antagonists and adenosine 2a agonists. (Fig. 4-5, col. 1, lines 20-30)

25... **Claims 37 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,568,389 (Rand et. al.).**

Deleted: 14

26... Rand discloses:

Deleted: 15

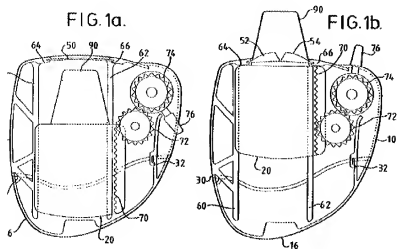
A housing assembly for a fluid discharge device, the housing assembly comprising: (element 10)

a housing for moveably supporting the fluid discharge device, (element 20, 60, 62)

a body having a nozzle extending therefrom for insertion into a body cavity and (element 90)

at least one toothed lever pivotally supported within the housing (element 74, 76, 70)

for toothed engagement with a container forming part of the fluid discharge device. (elements 62, 72, Fig. 1a, 1b, col. 2, lines, 50-65, col. 4, lines 15-50, col. 7, lines 5-40)



the mouthpiece is in the in-use position.

- 15 FIGS. 1a and 1b shows a first inhalation device herein comprising a body 10 having an end cap 16, wherein the end cap 16 is reversibly attached to the body 10 by a snap fit mechanism 30,32. Within the body 10 there is provided a medicament container 20, and integral therewith a mouthpiece 90. In the storage position the mouthpiece 90 is kept protected from outside contamination by cover 38, which comprises an arrangement of elastomeric flaps 52, 54 forming a hygienic curtain. The integral medicament container 20 and mouthpiece 90 are mounted for translational movement on guide rails 60, 62. An outer face of the medicament container 20 is provided with a series of teeth forming a rack 70, which is in communication with first wheel 72 mounted for rotation on the body 10 thereby forming a rack and pinion mechanism. The first wheel 72 also communicates with second wheel 74, which is also mounted for rotation on the body 10. Rotation of the second wheel 74 is rotationally coupled to that of drive lever 76, which protrudes from the body 10 making it user accessible.
- 20 25 30 35 40 45 50
- Actuation of the device from the storage position (shown in FIG. 1a) to the in-use position (shown in FIG. 1b) is achievable by a user-driven actuation of the drive lever 76. In practice, this can be achieved by a one-handed operation wherein the body 10 of the device is gripped between palm and fingers and the drive lever 76 is rotated by a motion of the thumb. It may be seen that rotation of the device lever 76 results in similar rotation of the second wheel 74 and opposite rotation of the first wheel 72, which engages with the rack 70 on the medicament container thereby driving the integral medicament container 20 and mouthpiece 90, upwardly along the guide rails 60, 62 to the in-use position. Ejection of the medicament container 20 from the body 10 is prevented by stops 64, 66.
- It may also be seen that on actuation the mouthpiece 90 impacts with, and causes a parting, of the protective curtain arrangement 52, 54. In an improvement herein, the curtains
- 3725 in a first direction moves the mouthpiece towards said storage position and movement of the mouthpiece actuator in an opposing direction moves the mouthpiece towards said in-use position.
- Herein the term 'mouthpiece' is used in a generic sense to mean an element shaped such as to be insertable into the mouth or nose of a patient for inhalation therethrough.
- In one preferred aspect, the mouthpiece actuator and mouthpiece are coupled by a coupling mechanism. In one particularly preferred aspect, the coupling mechanism comprises a rack and pinion mechanism. In another particularly preferred aspect, the coupling mechanism comprises a biased lever mechanism.
- In one aspect the medicament carrier is within the body. In another aspect the medicament carrier is attachable to the exterior of the body.
- In another preferred aspect, the mouthpiece actuator and

410  
An essentially flat cover 450 is retainably mounted on first and second guide rails 460, 462 provided on a first face of the body 410 for shidable movement thereon. The exterior surface of the cover 450 has contours 452 for ease of grip by the thumb of the user. The interior surface of the cover 450 communicates with first and second rack/pinion mechanisms 470, 480 which are aligned with the axes defined by the first and second guide rails 460, 462. Each of the first and second rack and pinion mechanisms 470, 480 (wherein, for clarity, only the first mechanism is shown in detail on FIGS. 5b and 5c) comprises a first rack 472, 482 attached to the cover 450, which communicates with a wheel 474, 484 axially mounted to the body 410, which wheel 474, 484 communicates with a curved second rack 476 which is mounted for communication with the mouthpiece 490.

Actuation of the device from the storage position (shown in 5c) to the in-use position (shown in FIGS. 5a and 5c) is achievable by the user holding the body 410 in a cupped palm and using a thumb motion to slide the cover 450 along the guide rails 460, 462 in a direction towards the end cap 416. The first rack 472 is thus brought into engagement with wheel 474, which rotates and engages second rack 476, thereby moving the second rack 476 in the opposite direction. In turn, the movement of the second rack 476 causes the mouthpiece 490 to be moved to the in-use position, in which it protrudes from the body 410. In the in-use position it may be seen that the interior of the mouthpiece 490 communicates with the hollow interior of the transition piece 440, which itself communicates with the medication container 420. Thus an inhalation passageway is provided from the mouthpiece 490 to the medication container 420. Deactivation is achievable by the reverse sliding motion of the cover 450.

FIGS. 5a and 5b shows a sixth inhalation device herein comprising a body 510, which is overall shaped for ease of

Rand discloses:

The [housing] assembly of claim 37 in which

the or each lever is pivotally supported within the housing

by a pivotal connection between the body and

the respective lever. (elements 10, 74, 76, Fig. 1a, 1b, col. 4, lines 15-50)

### Claim Rejections - 35 USC § 103

27. . . . The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

Deleted: 16

all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Deleted: 17

**28.** The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Deleted: 18

**29.** Claims 4-5, and 8 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Meshberg, and further in view of Rand.

Deleted: 19

**30.** Claim 4, Meshberg teaches all the elements of claim 4 except that the or

each lever has a toothed portion for engagement with a toothed rack that creates

a driveable connection. Rand teaches these missing elements. (element 74,

Fig. 1a, 1b, col. 2, lines, 50-65, col. 4, lines 15-50, col. 7, lines 5-40) Meshberg

modified by Rand creates a nasal dispenser that operates by using one or more

levers on the sides of the container to actuate the container inside the housing to

dispense its content with the use of toothed rack or racks to make the connection

between the levers and fluid container. It would have been obvious to one of

ordinary skill in the art to adapt the nasal dispenser of Meshberg with the levers

attached to a toothed rack of Rand because both devices are related to nasal

dispensers which utilize a central upwardly/downwardly movable container

dispenser. A person of ordinary skill in the art would be motivated to combine

these references because Rand provides a reliable way to translate the energy of

the levers into a driveable, controllable motion for ease of movement and convenience by the user.

Claim 5, Meshberg as modified in claim 4 teaches all the elements of claim 5 except for a container with a longitudinal axis where each toothed rack extends parallel to the longitudinal axis of the container. Rand teaches these missing elements. (element 70, Fig. 1a, 1b, col. 2, lines, 50-65, col. 4, lines 15-50) Meshberg modified by Rand creates a nasal dispenser as described in claim 4 with the additional limitation of the toothed rack or racks of Rand being parallel to the generally longitudinal axis of the container, as shown in Figure 1a, and 1b. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the parallel toothed rack or racks of Rand for the reasons stated above in claim 4.

Claim 8, Meshberg as modified in claim 4 teaches all the elements of claim 8 except for a container with two toothed racks attached to it. Rand in a different embodiment teaches these missing elements. (elements 410, 480, 482, 484, Fig. 5a, 5b, 5c, col. 7, lines 5-40) Meshberg modified by Rand creates a nasal dispenser as described in claim 4 with the additional limitation of two toothed racks attached to the container holding the dispensing fluid. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the two toothed racks of Rand in the Figure 5 embodiment, because both references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the two embodiments of Rand and Meshberg combined show the a very efficient way to

transfer the energy from the levers to the container in an even, effective and and reliable way.

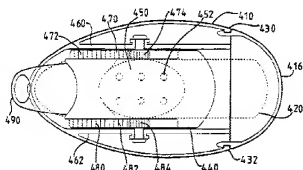


FIG. 5a.

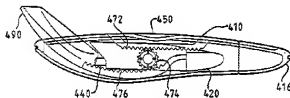


FIG. 5b.

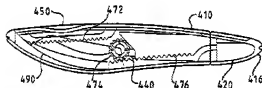


FIG. 5c.

Rand:

31. Claims 6-7, and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meshberg, and further in view of Rand and US 6,527,144 (Ritsche et. al.).

Deleted: 20

32. Claim 6, Meshberg as modified in claim 4 teaches all the elements of claim 6 except for each toothed rack has two sets of teeth, one to engage a first lever and a second set to engage a second lever. Ritsche teaches that each

Deleted: 21



racks of claim 7 attached to both the neck and the two actuating levers. Ritsche teaches a pair of levers that communicate with a toothed rack that is attached toward the upper end of the dispensing container (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55). It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the toothed rack attached toward the one end of the dispensing container that also communicate with the pair of actuating levers as taught in Ritsche, because both are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the neck portion serves a convenient and effective location to transition from the fluid container to the fluid portion creating chamber, and therefore locating the toothed racks there reduces the overall size of the toothed rack apparatus because it is as close as possible to where it ultimately impacts.

Claim 9, Meshberg as modified in claim 7 teaches all the elements of claim 9 except for the container of claim 7 with the two toothed racks of claim 7 attached to opposite sides of the neck portion. Ritsche teaches that the toothed rack can be positioned near the end of the dispensing container (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55). Rand teaches that two toothed racks can be on opposite sides of the dispensing container. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40). A reasonable combination of the references would create a nasal dispenser system where a pair of levers were attached to two toothed racks that were opposite one another about the neck or end of the dispensing container. It would have been obvious to one of ordinary skill in the

art to adapt the nasal dispenser of Meshberg as described above because the all three references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the placement of the toothed racks on opposite sides reduces the possibility of an unwanted moment or "twist" as the container is actuated, as the opposite racks would balance one another out except in the preferred path of travel.

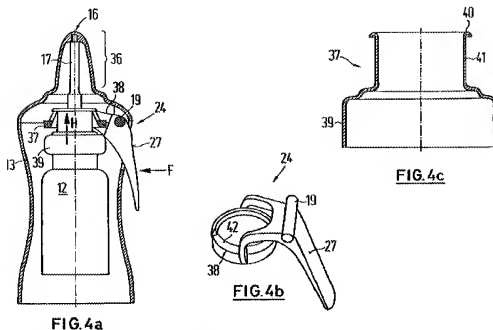
Claim 10, Meshberg as modified in claim 9 teaches all the elements of claim 10 except for the neck portion having a cylindrical outer surface with the toothed racks arranged directly opposite one another around the neck. Ritsche teaches in a different embodiment that the collar and therefore the neck portion of the dispensing container can be cylindrical. (element 38, Fig. 4a, 4b, 4c, col. 8, lines 45-68, col. 9 lines 1-20) Rand teaches that two toothed racks can be on opposite sides of the dispensing container. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Meshberg adapted by Rand and Ritsche can create a nasal dispenser with a pair of levers connected by teeth to two toothed racks at one end of a dispensing container where the end is cylindrical and the toothed racks are opposite one another about the cylinder. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg as described above because all references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because their combination creates a cylindrical device, which are easier to manufacture, and yet again managing to retain the best arrangement to avoid any moment or "twist" forming as the levers are actuated.

Claim 11, Meshberg as modified in claim 7 teaches all the elements of claim 11 except for the toothed racks are attached to a collar that then attaches the toothed rack to the neck portion of the container. Ritsche teaches in embodiment shown in Figures 4a-4c that a lever can be connected to a collar and the collar can be connected to the dispensing container in order to actuate the dispensing container. (elements 19, 27, 38, Fig. 4a, 4b, 4c, col. 8, lines 45-68, col. 9 lines 1-20) Ritsche in the embodiment depicted in Figure 6 show that a toothed lever can be engaged to a toothed rack which can be attached to the end of the dispensing container. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55). The one embodiment of Ritsche can adapt the other embodiment of Ritsche to create a pair of levers that connect to a pair of toothed racks that are attached to a collar that is connected with the neck portion of the dispensing container. A person of ordinary skill in the art would be motivated to create this combination because a collar can serve as an additional way to ensure that any movement created in the toothed racks translates only into movement along the desired axis of movement. As the collar in the first embodiment serves to create that actuation of the dispensing container, a person of ordinary skill in the reasonably predict that the combination would succeed. By adapting Meshberg with Ritsche, a nasal dispenser with a pair of toothed levers that engage a pair of toothed racks that connect to a collar and ultimately to the dispensing container can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the combination of embodiments of Ritsche to create the device of claim 11 because all the references are related

nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the device of claim 11 is an efficient way to translate energy from levers to toothed racks to the ultimate container, in the area where it would be the most cost effective connection: at the collar used near the neck portion of the device.

Claim 12, Meshberg as modified in claim 11 teaches all the elements of claim 12 except for the toothed racks are formed as an integral part of the collar. One of the ways that the toothed rack and the collar could be connected to one another is by forming them integral with one another, by combining the two embodiments of Ritchse. (element 38, Fig. 4a, 4b, 4c, col. 8, lines 45-68, col. 9 lines 1-20) (Fig. 6, elements 21, 49, 50, col. 10, lines 29-55) It is a recognized in the general industry that mechanically connecting parts together is an issue that arises very often, and a method must be chosen. There only a finite number of ways to connect one item to another. It would have been obvious to one of ordinary skill in the art to try to connect the collar of claim 11 to the toothed rack of claim 11 by simply forming them integrally together, presumably in the same mold.

Ritsche:



45 counter to the force direction H, there is a movement of the media container relative to the rising tube 17. A discharge stroke is produced by the displacement of the movable parts of the pump element 18.

FIG. 4b shows the retaining element 24. With respect to the pivot pin 19 of the actuating element 24, which is held on the casing side in corresponding abutments, the handling surface 27 forms a lever or moment arm for producing a pivoting movement, i.e. an actuation of the actuating element. The retaining ring 38 projects from the pivot pin 19 at an angle to the handling surface 27. The retaining ring can be an open ring into which are inserted the retaining means 37, shown in FIG. 4c and which can be securely held in the retaining ring 38. For this purpose the ring segments 38a and 38b are spread apart and after inserting the retaining means 37 they are embraced in an angular range greater than 180° by the ring segments 38a and 38b. To ensure a reliable engagement behind the flanged ring 40 of the retaining means 37, a corresponding tapered, chamfered, back-engaging sloping surface is formed on the retaining ring.

FIG. 4c shows the banding or retaining means 37 substituted by a modified crimp sleeve 39. The crimp sleeve 39 fits in the conventional manner the pump element 18 and

optionally additional sealing means such as a rubber plug in the filling opening 21 of the media container 12. The free ends of the crimp sleeve are for this purpose bent around a correspondingly constructed not shown bead in the vicinity of the opening 21 of the media container 12 in such a way that there is a firmly engaging fit for the pump element 18 and in certain circumstances the sealing means. As a result of this type of fixing a media-tight fixing of the pump element 18 in the filling opening can be obtained. Over and beyond the conventional design of a crimp ring, the retaining means 37 has a standing collar 41 on which projects the crimp sleeve side remote from the media container 12. The standing collar 41 is bounded by the flanged ring 40. Alternatively to the flanged ring there could also be some other diameter enlargement, such as a bead. The sloping surface 42 of the retaining ring 38 can readily engage behind the flanged ring 40. Thus, a force transfer in the axial direction, i.e. in the orientation of the standing collar 41 is readily possible.

FIG. 4d shows in side view the discharge apparatus 11 of 20

Claim 13, Meshberg as modified in claim 12 teaches all the elements of claim 13 (see below) except for the neck portion has two toothed racks formed as integral parts of the collar. Rand teaches that a rack and pinion system can be

engaged to a dispensing container by two toothed racks. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Ritsche teaches that an equivalent system to the rack and pinion system is toothed levers engaged to toothed racks. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55). Ritsche also teaches in a different embodiment using a collar to connect the lever to the neck of the dispensing container. (Fig. 4a, 4b, 4c, col. 8, lines 45-68, col. 9 lines 1-20) By adapting Meshberg with the two embodiments of Ritsche and the teachings of Rand, a nasal dispenser with a collar connected to the neck of the dispensing container with two integrated toothed racks can be created. If one toothed rack is considered for integrating with the collar, two symmetric toothed racks would be obvious to try to a person of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg as described above because all of the references are nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because by attaching the two toothed racks directly to the collar, a more efficient transfer of energy from the levers to the toothed racks to the collar and thereby the fluid container is created.

Claim 14, Meshberg as modified in claim 11 teaches all the elements of claim 14 except that the cylindrical outer portion of the neck of the dispensing container has a circumferentially extending groove to engage the collar. Ritsche teaches this missing element. (Fig. 4a, 4b, 4c, element 37, 38, col. 8, lines 45-68, col. 9 lines 1-20). Ritsche teaches in Figures 4a-4c a cylindrical collar to engage the cylindrical neck of the dispensing container that has a groove in order

to facilitate their engagement to one another. By adapting Meshberg as modified in claim 11 with Ritsche, a nasal dispenser with toothed racks attached to a collar, where the collar engages the neck portion of the dispensing container with the assistance of an annular groove can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with Ritsche to create the device of claim 14, because all are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references to create the device of claim 14 because a groove in the collar is a reliable way to create an interference fit to ensure that force is translated to or from the collar to the container reliably.

Claim 15, Meshberg as modified in claim 14 teaches all the elements of claim 15 except that the collar of claim 14 moves the neck of the dispensing container when the levers are actuated. Ritsche teaches this missing element. (Fig. 4a, 4b, 4c, element 37, 38, col. 8, lines 45-68, col. 9 lines 1-20) Ritsche teaches in Figures 4a-4c that when the lever or levers of claim 14 are actuated, the collar will move and thereby move the neck of the dispensing container as well because the Figures and the specification indicate that it is engaged by an interference fit. By adapting Meshberg as modified in claim 14 with Ritsche, a nasal dispenser with toothed racks attached to a collar, where the collar engages the neck portion of the dispensing container with the assistance of an annular groove, where the groove is designed to create an interference fit between the collar and the neck of the dispensing container, can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of

Meshberg with Ritsche to create the device of claim 15, in order to create an improved device that provides a more reliable drivable connection between the collar and the dispensing container. A person of ordinary skill in the art could reasonably predict that the combination's result would be a nasal dispenser with a better connection between the collar and the neck of the dispensing container, as interference fits are a common choice to create a mechanical connection in the art.

Claim 16, Meshberg as modified in claim 4 teaches all the elements of claim 16 except that each lever in the device from claim 4 engages both toothed racks with teeth. Rand teaches that two toothed racks can be attached to a given dispensing container and that each rack and pinion system can engage both toothed racks at the same time (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Ritsche teaches a lever with teeth to engage toothed racks. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55).

The rack and pinion system of Rand can be replaced with the teethed lever system of Ritsche and yield the same results and serve the same function. This substitution is one that a person of ordinary skill in the art would try because as noted before, the two systems create the same result and serve the same function. By adapting Meshberg with Rand and Ritsche, a nasal dispenser with a pair of actuating levers attached to two teethed racks each can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the traditional teethed lever to toothed rack system of Ritsche with the rack and pinion system of Rand that connects with two

teethed racks at the same time because all references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the toothed racks work better with a reliable way of transferring the energy in a symmetrical and controllable way, and a teeth and gear system provides that control very well.

Claim 17, Meshberg as modified in claim 16 teaches all the elements of claim 17 except that each lever has a set of teeth to engage each toothed rack, and each toothed rack has a set of teeth to engage each lever. Rand teaches that two toothed racks can be attached to a given dispensing container and that each rack and pinion system can engage both toothed racks at the same time. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Ritsche teaches a lever with teeth to engage a toothed rack and a toothed rack with teeth to engage the lever. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55). The rack and pinion system of Rand can be replaced with the teethed lever system of Ritsche and yield the same results and serve the same function. It is a substitution that one of ordinary skill in the art would try because the systems yield the same results and can serve the same function. By adapting Meshberg with Rand and Ritsche, a nasal dispenser with a pair of toothed levers that engage a pair of toothed racks can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg with the traditional teethed lever to toothed rack system of Ritsche with the rack and pinion system of Rand that connects with two teethed racks at the same time because all the references relate to nasal dispensers. A person of ordinary skill

in the art would be motivated to combine these references because the combination of elements creates an efficient system to transfer energy from a pair levers to a pair of symmetric toothed racks to two pairs of toothed racks in order to transfer the energy to the dispensing container in a way to that offers as much control and as little opportunity for a twisting motion as possible.

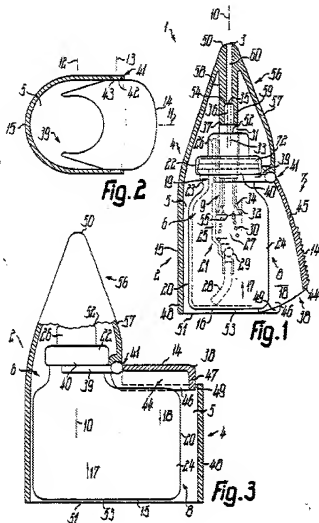
Deleted: 22

**33. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meshberg as modified by Ritsche, and further in view of DE 19610456 (Fuchs, K.).**

Deleted: 23

**34. Claim 18, Meshberg as modified in claim 16 teaches all the elements of claim 18 except that the lever or levers is or are U-shaped in cross section with the first and second flanges joined together by a bridging portion. Fuchs teaches the missing elements. (Figures 1-3, element 39, 41, Abstract) Fuchs teaches a U-shaped lever that pivots around the bridging portion of element 41, all of which can be viewed from Figures 2 and 3. By adapting Meshberg as modified in claim 16 with Fuchs, a nasal dispenser with toothed racks attached to the container, engaged to U-shaped toothed levers that pivot on a bridging portion, can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg of claim 16 with Fuchs to create the device of claim 18 because all of the device are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the resulting device creates a way to pivot the levers as they are actuated in a reliable and predictable way, so as to reduce the chance of breakage or inconsistent dispensing of the fluid product.**

Claim 19, Meshberg teaches all the elements of claim 18 except for the first and second flange of the levers of claim 18 are toothed to engage with corresponding toothed racks. Ritsche teach these missing elements. Ritsche teaches that a flange of a lever can be toothed to correspond with a toothed rack. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55) By adapting Meshberg with Ritsche, one can create a nasal dispenser with U-shaped levers with a pivot point for each lever having toothed flanges that engage a toothed rack that are engaged with a dispensing container. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg as described above because all references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the resulting design would create an efficient way to both create an engagement between the toothed racks and the toothed levers by using flanges to extend the flange toward the toothed rack and still allow the lever to be positioned far enough away from the central container to accommodate as much fluid in the container as possible while still accommodating actuation.



Fuchs:

[from the HTML translation of the abstract of Fuchs]

# **BASIC-ABSTRACT:**

One component (9) of the discharge feeder (7) is installed separately in the housing (4) in an assembly unit drivably joined in step-down ratio to one of the handles (14) by means of the externally placed parts (39,40) of the actuator coupling (19). The first component of the feeder (6) contains a pressure space (27) for the dispensed medium, medium accumulator (20), housing (25) and valved (29) medium inlet channel (28) plus component (8,9) re-set spring (30), second handle (15), second coupling half (40) and/or coupling securement cap (22).

The second component (9) of the feeder includes the trip plunger (31) with channel (33) leading to the medium outlet end (3) plus displacement plunger (32) and outlet valve (34) and/or connection (26) to the main housing (4). The discharge feeder (6) contains a piston pump (21) whose space (27) lies within the accumulator (20). One or other handle (14-16) and one or other coupling element (39,40) is movably mounted on the housing and the first element (39) of the coupling is rigidly joined to or integrated with the first handle (14). The housing (4) totally encloses the feeder (6) and/or the handle (14) directly adjoining the feeder (6) forms its outer screen.

ADVANTAGE - The handles drive the dispenser components in variable ratio using a totally screened outlet feeder in a self-contained format suitable for one-handed use as required when handling minuscule media.

Deleted: 24

**35. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meshberg and further in view of Fuchs.**

Deleted: 25

**35. Claim 25, Meshberg teaches all the elements of claim 4 except for a** nozzle that is part of a body member and the lever or levers are pivotably supported within the housing by a pivotable connection between the lever and the body member. Fuchs teaches these missing elements. (Figures 1-3, elements 41, 45, 50, Abstract) Fuchs depicts a nozzle 50 which is formed as part of the body member, and also shows a lever 45 pivoting at pivot point 41. By adapting Fuchs to Meshberg, a nasal dispenser with toothed levers to engage with toothed racks with a nozzle formed as part of the body member, as the levers pivot on a pivot point to connects the levers to the body member can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Meshberg as described above because all of the references relate to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the resulting design would create a logical, simple, reliable and efficient way to merge the nozzle for dispensing with the body housing so they could molded as one piece, while also

creating a way for the lever to be attached to the body housing while still remaining pivotable, because molding one piece with many parts is more cost efficient than molding many pieces for fewer parts in general, and the levers can only be attached a finite number of ways to the body and remain pivotable.

**37. Claims 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rand, and further in view of Ritsche.**

Deleted: 26

**38.** Claim 38, Rand teaches all the elements of claim 38 except that the device has two levers, one on each side. Ritsche teaches this missing element. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55) By including the two levers of Ritsche that are on opposite sides to the nasal inhaler of Rand, the device of claim 38 is created. A person of ordinary skill in the art would find it obvious to adapt Rand with Ritsche to create a nasal inhaler with an integrated nozzle with two toothed levers on opposite sides of the dispensing container, because all of the references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because this would allow the transferred force from the actuated levers to be evenly distributed between the two levers on opposite sides, which would tend to cancel the unintended movement of the dispensing container in a direction not inline with the preferred axis of movement.

Deleted: 27

Claim 39, Rand teaches all the elements of claim 39 except that the device of claim 37 where the or each lever has a first and second toothed portions for engagement with respective racks attached to the container. Rand teaches a rack and pinion system where two toothed racks are attached to

opposite sides of a dispensing container. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Ritsche teaches that two toothed levers can engage both sides of at least one toothed rack that is attached to the side of a dispensing container. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55) It would be obvious to a person of ordinary skill in the art to substitute the rack and pinion system of Rand with the toothed lever system of Ritsche because they serve the same function and achieve the same result of transferring motion. By adapting Rand with Ritsche, a nasal dispenser with two toothed racks attached to the sides of a dispensing container with two toothed levers engaging both toothed racks simultaneously can be created. A person of ordinary skill in the art would find it obvious to adapt Rand with Ritsche to create the above described device because all references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because this would allow the transferred force from the actuated levers to be evenly dispersed between the two toothed racks such that motion in any direction other than the preferred axis would be avoided.

Deleted: 28

**39. Claims 40-41, 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rand as modified by Ritsche, and further in view of Fuchs.**

Deleted: 29

**40. Claim 40, Rand as modified in claim 39 teaches all the elements of claim 40 except that each lever is U-shaped and the two flanges of the "U" are joined together by a bridging portion. Fuchs teaches the missing elements. (Figures 1-3, element 39, 41, Abstract) Fuchs teaches a U-shaped lever that pivots around**

the bridging portion of element 41, all of which can be viewed from Figures 1, 2 and 3. By adapting Rand as modified in claim 39 with Fuchs, a nasal dispenser with toothed racks attached to the container, engaged to U-shaped toothed levers that pivot on a bridging portion, can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Rand of claim 39 with Fuchs to create the device of claim 39, because all of the references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the combination creates an improved device that provides a way to pivot the levers as they are actuated in a reliable and predictable way, so as to reduce the chance of breakage or inconsistent dispensing of the fluid product.

Claim 41, Rand as modified in claim 40 teaches all the elements of claim 41 except for levers having two toothed flanges both of which engage the two toothed racks attached to the dispensing container. Ritsche teaches these missing elements. Rand teaches that two toothed racks can be on opposite sides of the dispensing container. (Fig. 5a, 5b, elements 472, 482, col. 2, lines, 50-65, col. 7, lines 5-40) Ritsche teaches that a flange of a lever can be toothed to correspond with a toothed rack. (Fig. 6, elements 49, 50, 21, col. 10, lines 29-55) It would be obvious for a person of ordinary skill in the art to utilize the levers of Ritsche as a substitute for the rack and pinion system of Rand because the two systems serve the same function and create equivalent results. By adapting Rand with Ritsche a nasal dispenser with a pivot point for each lever having toothed flanges that engage both toothed racks that are engaged with a

dispensing container can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Rand as described above because all of the references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the resulting design would create an efficient way to both create an engagement between the toothed racks and the toothed levers by using flanges to extend the flange toward the toothed rack and still allow the lever to be positioned far enough away from the central container to accommodate its actuation.

Claim 43, Rand as modified in claim 37 teaches all the elements of claim 43 except that each lever is pivotably supported within the housing by a pivotable connection between the lever and part of the housing. Fuchs teaches these missing elements. (Figures 1-3, elements 41, 45, Abstract) Fuchs depicts a lever 45 pivoting at a pivot point 41 connected to the main housing. By adapting Rand with Fuchs, a nasal dispenser as in claim 37 with the added limitation of levers attached to the housing by pivot points can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Rand with the levers connected to the housing with pivot points because all of the references are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because one of the best ways to assure that the actuated lever transfers its energy successfully to the dispensing container is to connect it the housing itself.

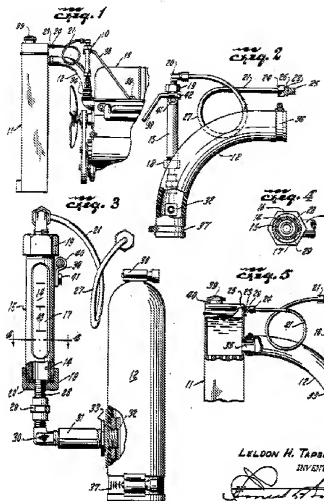
Deleted: 30

41 Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rand, and in further view of US 2,662,405 (Tapscott, L.).

Deleted: 31

42 Claim 42, Rand as modified in claim 37 teaches all the elements of claim 42 except for a housing with a front, a rear, and two opposing side walls with at least one of the front or rear walls having an aperture therein to view the level of the fluid in the container. Rand and Tapscott teach these missing elements. Rand nowhere specifically discloses any drawing with an element labeled for a front, rear or two opposing side walls, but it does depict an embodiment that has a front, rear, and two opposing side walls in Figures 1a and 1b. (Figure 1a, 1b) Furthermore, this is an example of simple design choice. It would have been obvious to a person of ordinary skill in the art to design a nasal dispenser with a front, rear, and two opposing side walls, because Applicant has not listed that the four walls provides an advantage, is used for a particular purpose further than that the levers should be kept opposite one another, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with more or less walls because the only relevant feature of the walls of the nasal dispenser is that the levers ought to be opposed to one another. Therefore, it would have been an obvious matter of design choice to modify Rand to obtain the invention with 4 walls as specified in claim 42. Tapscott discloses a viewing window for a container to allow the viewer to determine how much liquid remains in a container. (Fig. 1-3, elements 14, 43, claim 1) By adapting the device in Rand as modified in claim 37, with the obvious design choice of utilizing four walls, and adding a the fluid level viewer of Tapscott, the device of claim 42 can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Rand as described

above because all of the references are related to fluid dispensers. A person of ordinary skill in the art would be motivated to combine the references because the resulting design would create a body shape that is one of the traditional choices for forming any body, that of an object with a front, rear, and two opposing side walls, which has the advantage of easier manufacture and reasonable reliability, and the choice to place the fluid level viewer in either the front or rear walls would be considered because fluid level viewers is an added feature that is a common consideration for any fluid container in the industry.



LELTON H. TAPSCOTT  
 INVENTOR

Tapscott:

10 SPIRIT RAIL SCOPE TO USE AS FURNACE

What is claimed is:  
 In a liquid level gauge for a motor having a radiator and a hose connection from said motor to the upper portion of said radiator, comprising a sight tube, a bracket secured to said motor for holding said sight tube vertically and on substantially the same level as the top of said radiator at the rear thereof, a flexible tube connecting the upper end of said sight tube to said radiator at a point adjacent the top of said radiator to maintain equal pressures in said radiator and sight tube, and rigid tubular means connecting said lower end of said sight tube to said hose connection at a level below said upper portion of said radiator whereby the fluid in said radiator and said hose connection may flow into said tube.

LELTON H. TAPSCOTT.

**43. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rand as modified by Ritsche and Fuchs, and in further view of Meshberg.**

Deleted: 2

**44.** Claim 44, Rand as modified in claim 37 teaches all the elements of claim 44 except that the housing has a front, rear, and two opposing side walls and each lever is pivotally connected to the front and rear walls. Meshberg teaches these missing elements (Fig. 1-6, col. 3, lines 65-75, col. 4, lines 1-8, 23-30). The decision to define the housing as having four walls is arguably depicted in Rand in Figures 1a and 1b, but is furthermore considered an "obvious design choice" beyond ensuring that the pair of levers are opposite one another, which the description of four walls does not require. Meshberg presents an example of a pair of levers that are opposite one another, positioned in a way that the surfaces said levers are pivotally connected to could arbitrarily be defined as "front" and "rear" walls. By adapting the device of Rand in claim 37 with the four walls and a pair of levers pivotally connected to opposite walls, the device of claim 44 can be created. It would have been obvious to one of ordinary skill in the art to adapt the nasal dispenser of Rand as described above because Rand and Meshberg are both nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because the resulting design would create a body shape that is one of the traditional choices for forming any body, that of an object with a front, rear, and two opposing side walls, which has the advantage of easier manufacture and reasonable reliability, and the choice to place the pair of levers opposite one another allows the levers to be oriented in a

Deleted: 33

way that eliminates movement forces in directions other than the preferred axis of movement upon the levers being actuated.

Claim 45, Rand as modified in claim 42 teaches all the elements of claim 45 except that the levers project outwardly from the housing through a respective aperture formed in one of the side walls. Meshberg along with consideration of "obvious design choice" as described in the rejection of claim 42 above teach these missing elements. (Fig. 4-5, col. 3, lines 65-75, col. 4, lines 1-8, 23-30) Meshberg teaches a pair of levers that project outwardly from the housing through a "side wall". As noted in the rejection of claim 42, the describing of the outer surface of the nasal dispenser as four walls is ultimately arbitrary other than that in many of the claims, the levers must be opposite one another. It is again a matter of obvious design choice to describe the housing as having four walls, and assigning a lever or a fluid level viewer to each one. Common sense indicates that the fluid level indicators and the levers should not overlap one another or they would impinge their function. Ultimately the assigning of the fluid level viewer and the levers to a give wall is arbitrary and a question of obvious design choice.

Claim 46, Rand as modified in claim 45 teaches all the elements of claim 46 except that the levers project outwardly from the housing form finger grips. Meshberg teaches this missing element. (Fig. 4-5, element 23, col. 4, lines 1-30) Meshberg teaches that the projecting levers of claim 45 have finger grips. By adapting Rand as modified in claim 45 with Meshberg, the device of claim 46 can be created. A person of ordinary skill in the art would find it obvious to adapt

Rand with Meshberg, because both are related to nasal dispensers. A person of ordinary skill in the art would be motivated to combine these references because it is a common adaption in the industry to design finger grips for devices that are handheld.

more openings 23 in positions overlying the camming surface. The dispensing package, with the actuating means above described, may be completed by providing the casing with a removable cover cap 24 for closing the opening 16b in the end wall 16 through which the material is dispensed.

In operating the dispensing package 10 above-described, that is to actuate the operator of the valve means for dispensing material from the container, the cover cap 24 is removed and the casing gripped in one hand as would be natural to hold the dispensing package. The openings 23 are so located that natural gripping of the container will result in the finger tips entering the openings 23 and, on exerting pressure therethrough, the tips of the fingers will engage the camming surface 18 of the collar so that the collar and its connected container are cammed toward the end wall 16 of the casing. Since the stem portion 14 of the valve means is connected to the casing and held thereby against outward movement, the shifting of the container within the casing will result in the desired relative longitudinal movement between the stem portion and the container being achieved, thereby operating the valve and dispensing the material.

In FIGS. 4 and 5 a modified form of the dispensing package 10, discussed in connection with FIGS. 1 to 3, is shown. While this construction is substantially identical to the construction of FIGS. 1 to 3, it differs in that button members 26 are pivotally mounted at the side wall 22 of the casing in the openings 23. While the buttons may be mounted in any known manner, they are here shown

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew P. Bainbridge whose telephone number is 571-270-3767. The examiner can normally be reached on Monday to Friday, 8:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on 571-272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Bainbridge

/Dmitry Suhol/  
Primary Examiner, Art Unit 3725

Deleted: David Isabella